

REMARKS

Reconsideration of this application as amended is respectfully requested.

In the Office Action, claims 1-12 are pending. Claims 1-12 stand rejected. In this response, claim 1 has been amended. No new claims have been added. No claims have been canceled. Thus, claims 1-12, as amended, remain pending. Support for the amendments can be found throughout the specifications as filed. No new matter has been added. Applicants reserve all rights with respect to the applicability of the Doctrine of Equivalents.

Rejections under 35 U.S.C. § 102(e)

Claims 1, and 5-12

Claims 1 and 5-12 stand rejected under 35 U.S.C. §102(e) as being anticipated by US Patent No. 6,785,529 to Ciccarelli et al. (hereinafter “Ciccarelli”). Applicants hereby reserve the right to swear behind Ciccarelli at a later date. However, applicants respectfully submit that applicants’ claims 1 and 5-12, as amended, are not anticipated by the cited reference.

Specifically, for example, independent claim 1, as amended, includes the limitations of:

“a tuner arrangement for converting any selected one of analog and digital channels to one of baseband and zero intermediate frequency analog quadrature signals,
a low pass filter for filtering out the selected channel from said analog quadrature signals, the low pass filer attenuating a first channel adjacent to the selected channel, the low pass filter attenuating a second channel at an aliasing frequency of the selected channel, the low pass filter correcting imbalances based on a feedback signal, and the low pass filter being a quadrature anti-alias filter,
a dual analog-digital converter for converting said analog quadrature signals to digital quadrature signals, and
a digital signal processor coupled with the low pass filter for processing said digital quadrature signals, said processing including performing channel filtering to pass said selected channel and substantially to reject other channel signals, said processor providing the feedback signal to the low pass filter”

(emphasis added)

It is respectfully submitted that Ciccarelli fails to teach the limitation of a low pass filter filtering out channels from analog signals based on a feedback signal provided by a digital signal processor.

Rather, Ciccarelli discloses a compensation circuit to correct for mismatch in a quadrature receiver comprising first and second mixers to receive a radio frequency modulated signal (Ciccarelli, Abstract). Ciccarelli teaches an adder combining signals to provide to I-Q low-pass filter for an A-to-D converter followed by a digital filter to attenuate quantization noise and a DC correction feedback to the A-to-D converter (Ciccarelli, col. 5, lines 54 – col. 6, lines 15, Fig. 3). Ciccarelli also describes a wireless communication device including a low pass filter, an A-to-D converter, a digital filter, a compensation circuit coupled to a CPU to determine compensation factors for the compensation circuit (Ciccarelli, col. 11, lines 5-42, Fig. 9). However, Ciccarelli is completely silent about a low pass filter filtering out channels from analog signals based on a feedback signal provided by a digital signal processor.

In order to anticipate a claim, each and every limitation of the claim must be taught by the cited reference. It is respectfully submitted that Ciccarelli fails to disclose the limitations set forth above. Therefore, it is respectfully submitted that independent claim 1, as amended, is not anticipated by Ciccarelli.

Given that claims 5-12 depend from and include all limitations of one of independent claims 1, as amended, applicants respectfully submit that claims 5-12 are not anticipated by Ciccarelli.

Rejections under 35 U.S.C. § 103(a)

Claims 2-4

Claims 2-4 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ciccarelli in view of view of US Patent No.6,724,439 to Horwitz (hereinafter “Horwitz”). Applicants

hereby reserve the right to swear behind Horwitz at a later date. However, applicants respectfully submit that applicants' claims 2-4 are patentable over the cited references.

Specifically, claims 2-4 depend from and include all limitations of independent claim 1, as amended, including the above noted limitations of a low pass filter filtering out channels from analog signals based on a feedback signal provided by a digital signal processor. It is respectfully submitted that neither Ciccarelli, for reasons similar to those discussed above, nor Horwitz, individually or in combination, disclose or suggest the noted limitations.

Rather, Horwitz describes a system that supplies a compressed digital signal to a digital television receiver including a source of compressed baseband signal, an encoder, first and second frequency shifters, and first, second, and third interpolators (Horwitz, col. 2, lines 19-24). According to Horwitz, an encoder supplies symbol data to a digital modulator which remodulates the symbol data for an output circuit to process the remodulated data to supply to a digital receiver over an RF output (Horwitz, col. 3, lines 43-48). However, nowhere does Horwitz disclose or suggest a low pass filter filtering out channels from analog signals based on a feedback signal provided by a digital signal processor.

Further, Horwitz specifically states an invention directed to an arrangement for providing a digital signal to a digital receiver (Horwitz, col. 2, lines 16-17). Additionally, Horwitz also states coupling a signal is superior than modulating a signal in analog systems (Horwitz, col. 1, lines 51-55). Applicants' claim 2, for example, includes the limitations of converting an analog channel to an analogically modulated signal. Thus, Horwitz teaches away from applicants' claims.

Moreover, Horwitz is related to digital VSB (vestigial side band) television receivers (Horwitz, col. 1, lines 9-12). Ciccarelli, on the other hand, relates to wireless communication such as radio receiver in radio communication (Ciccarelli, col. 1, lines 11-18). There is neither suggestion nor motivation to combine Ciccarelli and Horwitz. It is respectfully submitted that one with ordinary skill in the art would not, based on the teachings of Ciccarelli and Horwitz to combine with each other, because such a combination lacks reasonable expectation of success. Any suggestion for such a combination can only be based on the impermissible hindsight of

applicants' own disclosure.

Even if they were combined, such a combination still lacks the limitations of a low pass filter filtering out channels from analog signals based on a feedback signal provided by a digital signal processor.

As such, not only do Ciccarelli and Horwitz not disclose, individually or even in combination, the above noted limitations, but the references, considered as a whole, do not suggest the desirability and thus the obviousness of making the combination. It would be impermissible hindsight to combine Ciccarelli and Horwitz based on applicants' own disclosure.

In order to render a claim obvious, each and every limitation of the claim must be taught by the cited references. Therefore, in view of the foregoing remarks, it is respectfully submitted that independent claim 1, as amended, is patentable over Ciccarelli and Horwitz.

Given that claims 2-4, depend from and include all limitations of independent claims 1, , as amended, applicants respectfully submit that claims 2-4 are patentable over the cited references.

In view of the foregoing, applicants respectfully submit the applicable rejections and objections have been overcome

Authorization is hereby given to charge our Deposit Account No. 02 2666 for any charges that may be due. Furthermore, if an extension is required, then applicants hereby request such extension.

Respectfully submitted,

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